



Follow the **Greenway**[®] Neo N

A range of bio-sourced heat transfer fluids
with an increased efficiency

climalife[®]
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Greenway® Neo N: a range of bio-sourced heat transfer fluids that are even more efficient

The plant-based, high-performance alternative to conventional heat transfer fluids

Climalife, a recognised specialist in the formulation and production of heat transfer fluids for over 40 years, continues its environmental commitments with its **Greenway® Neo N range**.

With this range, Climalife offers a technological and environmental alternative to traditional fluids that are based on mono propylene glycol (MPG) from the petrochemical industry and are used mainly in the food, building and energy industries.

An improved and even more efficient formulation

The **Greenway® Neo** plant-based heat transfer fluid formula, which has been popular with the market since 2010, has been enhanced.



Manufacturing



Greenway® Neo N heat transfer fluids are formulated with bio-sourced 1,3-propanediol.

Production based on biotechnology

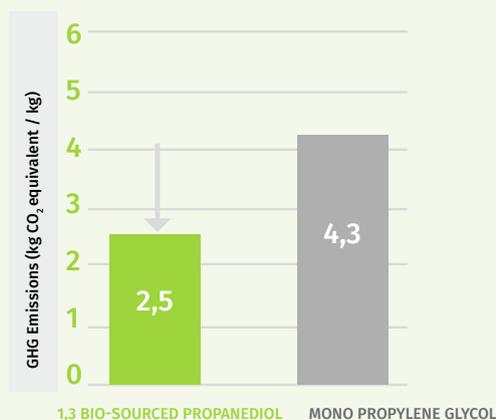
The plants are **harvested**, **fermented** and **refined** to produce **bio-sourced 1,3 propanediol**.



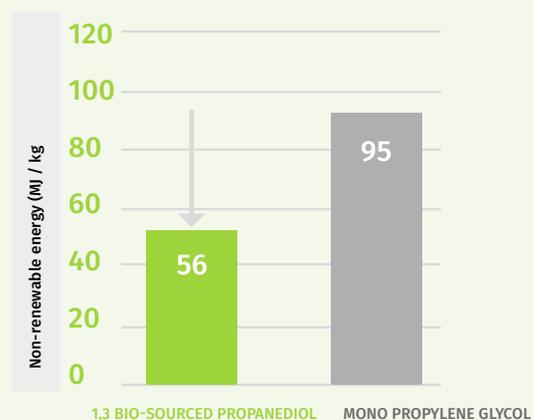
A reduced environmental footprint

The production of bio-sourced 1,3-propanediol consumes less energy and emits less CO₂ during its manufacture than MPG or synthetic chemical 1,3-propanediol.

Assessment of the overall environmental impact through life cycle analysis of all life phases of bio-sourced 1,3-propanediol until it leaves the production plant.



CO₂ emissions: 41.8% lower compared to mono propylene glycol



Non-renewable energy consumption: 41% lower compared to mono propylene glycol

The specific characteristics of Greenway® Neo N

Biodegradable

- Reduced risk of soil pollution in the event of a leak.
- Ideal for geothermal systems.

Powerful hybrid inhibitors

- Anticorrosive formulation H-OAT (neutralised carboxylic acids) without nitrite or amine.
- Excellent corrosion protection (tested according to ASTM D1384).

Bacteriostatic

- The formula of Greenway® Neo N, prevents the development of bacteria and avoids moulds, fungi or algae that alter the flow and heat exchange in the networks (bacteriostatic according to the international standard ISO 11930).
- Ideal for underfloor heating or radiators where it reduces clogging that limits the flow rate and the efficiency of the installation.

A range designed for optimum safety

The **Greenway® Neo N** range has been developed for use in a variety of industries and applications. The heat transfer medium must be selected according to the application, the operating temperature and the required protection.

Greenway® Neo N

Ideal for Food & Industrial applications

Climalife's Research and Development Department has developed formulae adapted to the safety of professionals and users. Greenway® Neo N is the only 1,3-propanediol based heat transfer fluid registered NSF HT1.



Nonfood Compounds
(HT1)

Greenway® Neo N is registered by NSF International (National Sanitation Foundation) for use in secondary refrigeration systems, where there may be a risk of accidental contact with food products.*

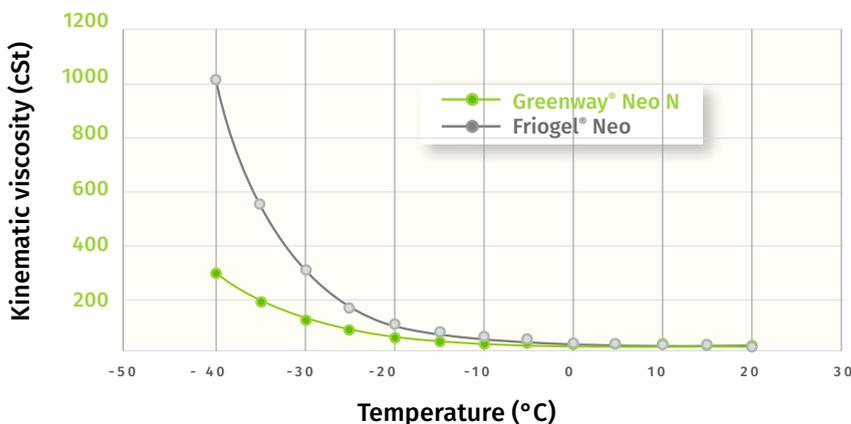
It is non-toxic and its composition is in accordance with NSF criteria and the Food and Drug Administration (FDA).



Viscosity of Greenway® Neo N:

This heat transfer fluid has a lower viscosity than MPGs and can be used at very low temperatures, unattainable with MPGs.

Comparison of viscosity versus temperature



Low viscosity of the Greenway® Neo N offers better performance:

- + Reduced power consumption due to improved energy efficiency.
- + Lower cost design using smaller pumps and reduced pipe diameters.
- + A reduction in the noise level of the pumps.

* In the event of contact with a heat transfer medium, even one registered to NSF HT1, the food must not be sold.

* All Climalife's MSDS are available on quickfds.com

Greenway[®] Neo Heat Pump N

This heat transfer fluid is perfectly suited for geothermal and air to water heat pump applications, air conditioning and domestic hot water production.



Biodegradable, it reduces the risk of soil pollution in the event of a leak.

Greenway[®] Neo Solar N

For thermal solar panel systems (flat plate or evacuated tube collectors).



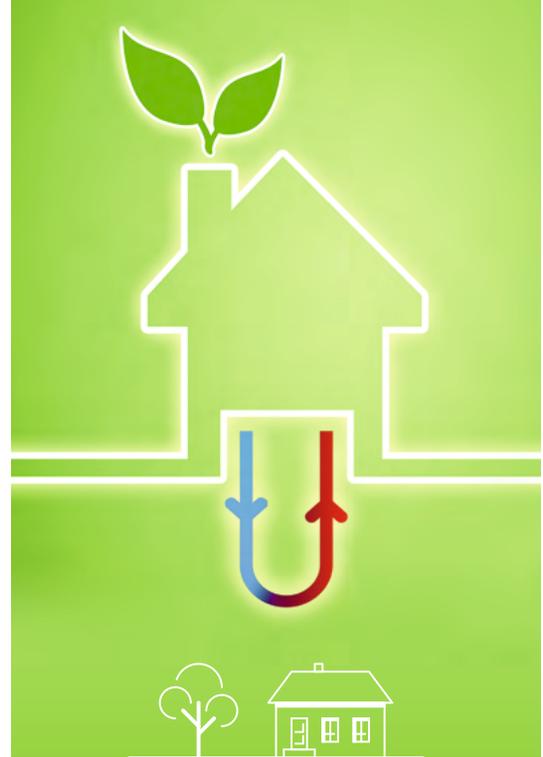
Stable at high temperatures:

Greenway[®] Neo Solar N is suitable for primary circuits of heating and hot water systems where the solar thermal panels are subjected to high temperatures. It remains stable up to 200°C.



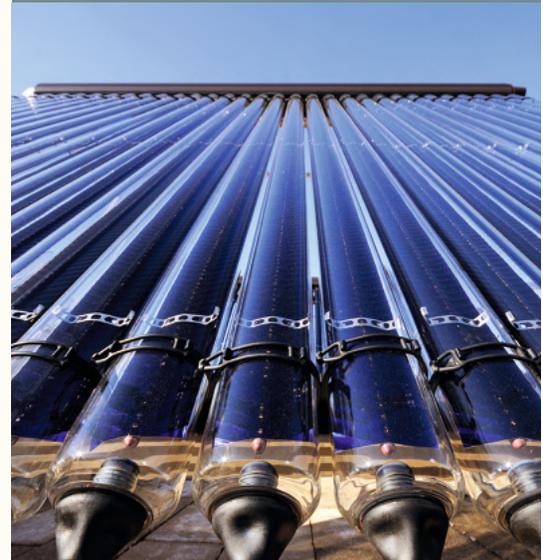
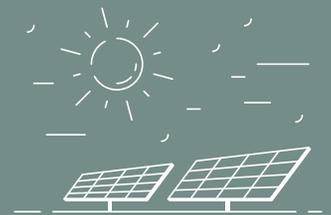
Increases the service life of the system:

Greenway[®] Neo Solar N is ideal for systems that experience periods of downtime or stagnation of the heat transfer medium in the panels at very high temperatures. Unlike MPG-based heat transfer fluids, where accelerated degradation occurs at 130°C, **Greenway[®] Neo Solar N** avoids blocking and tarring of the systems.



Both heat transfer fluids contain a bittering agent to prevent unintentional ingestion in the event of an accidental leak in the sanitary water system.

They comply with the regulations of certain EU member states for products used in installations for the heat treatment of water intended for human consumption. (eg French order of 14 January 2019).



The Greenway® Neo N range, a product for every application

	Greenway® Neo N	Greenway® Neo Heat Pump N	Greenway® Neo Solar N
Operating range	-50°C <--> +180°C	-20°C <--> +180°C	-30°C <--> +200°C
Industries	food production	building and energy	building and energy
Area of application	refrigeration	air conditioning, heating and hot water	heating and domestic hot water
Basis of formulation	vegetable - 1,3 propanediol bio-sourced		
Environnemental aspect	renewable resource - biodegradable		
Security	non-toxic, NSF HT1	contains a bittering agent in accordance with the regulations of certain EU member states	
Metal protection	high performance hybrid inhibitors		
Viscosity compared to Mono Propylene Glycol	much lower*	lower	
Preparation	to be diluted or ready to use		
Packaging	20 L, 210 L, 1000 Kg, bulk		

* See viscosity curve inside the brochure.



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